

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) Measuring arrangement for testing workpieces,

having ~~at least one~~ an optical fiber assigned to a workpiece, wherein ~~each~~ the optical fiber is designed as a Bragg grating sensor, and wherein ~~each~~ the optical fiber is arranged in a region of a surface of the workpiece, wherein ~~each~~ the optical fiber designed as a Bragg grating sensor is integrated in the surface of the workpiece,

and wherein ~~recesses are~~ a recess is introduced into the surface of the workpiece, said ~~recesses each~~ recess having a breadth and depth matched to a diameter of the ~~at least one~~ optical fiber designed as a Bragg grating ~~sensors~~ sensor, and wherein ~~said at least one~~ the optical fiber is ~~respectively~~ arranged in the recess ~~recesses and bonded into respective ones of said recesses~~.

2. – 4. (Cancelled)

5. (Currently Amended) The measuring arrangement according to claim 1, wherein ~~further comprising a plurality of said at least one optical fibers~~ a second optical fiber designed as a Bragg grating ~~sensors are~~ sensor and wherein the second optical fiber is arranged in a geometrical configuration different from ~~other ones of said at least one~~ the optical fiber.

6. (Currently Amended) The measurement arrangement according to claim 5, wherein ~~said plurality of optical fibers~~ the second optical fiber designed as a Bragg grating ~~sensors are~~ sensor is arranged with ~~curvatures which are different from said other ones of~~ a curvature that is different from the ~~said at least one~~ optical fiber.

7. (Currently Amended) The measuring arrangement according to claim ~~5~~ 1, wherein ~~at least one~~ the optical fiber designed as a Bragg grating sensor is arranged without curvature in ~~the~~ a form of a straight line in the region on the surface of the workpiece.

8. (Currently Amended) The measuring arrangement according to claim ~~5~~ 1, wherein ~~at least one~~ the optical fiber designed as a Bragg grating sensor is arranged in ~~the~~ a form of an angular straight line in the region on the surface of the workpiece in such a way that a first section of the fiber is angled off from a second section thereof.

9. (Currently Amended) The measuring arrangement according to claim ~~5~~ 1, wherein ~~at least one~~ the optical fiber designed as a Bragg grating sensor is arranged on the surface of the workpiece in such a way that the ~~at least one~~ optical fiber has at least one of a curved section of approximately 90 ~~degree~~ degrees and a curved section of approximately 180 ~~[[degree.]]~~ degrees with ~~neighbouring sections of the corresponding optical running approximately parallel to one another in the curved section of approximately 180 degree..~~

10. (Previously Presented) The measuring arrangement according to claim 1, wherein the workpiece is designed as a dynamically loaded component.

11. (Currently Amended) The measuring arrangement according to claim 1, wherein the arrangement is used to determine the properties of a dynamically loaded component.

12. (Currently Amended) Method for metrological instrumentation of workpieces, comprising the steps of:

arranging ~~at least one~~ an optical fiber designed as a Bragg grating sensor in a region of a surface of the workpiece; and

integrating ~~each of said at least one~~ the optical fiber designed as a Bragg grating sensor in the surface of the workpiece ~~with, recesses being introduced~~

~~into~~ in a recess in the surface of the workpiece ~~wherein a~~ whose width and depth of the recess is matched to ~~the~~ a diameter of ~~said at least one~~ the optical fiber designed as a Bragg grating sensors sensor, ~~wherein said at least one optical fiber is respectively arranged in the recesses and bonded into respective ones of said recesses.~~

13. – 14. (Cancelled)

15. (Currently Amended) The method according to claim 12, wherein ~~a plurality of said at least one optical fiber~~ a second optical fiber designed as a Bragg grating sensors ~~are~~ sensor is arranged in a different geometrical configuration from the optical fiber.

16. (Cancelled)

17. (Previously Presented) The measuring arrangement according to claim 10, wherein the workpiece is designed as a blade of a turbine or housing of a turbine.

18. (Cancelled)

19. (Previously Presented) The method according to claim 15, wherein said different geometrical configuration is a curvature.

20. (Previously Presented) The measuring arrangement according to claim 11, wherein said dynamically loaded component is a blade of a turbine or a housing of a turbine.